



PATENT
Attorney Docket No. 06502.0062-02000

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
Peter C. JONES et al.)
Serial No.: Not yet assigned.) Group Art Unit: Not yet assigned.
Filed: March 20, 1998) Examiner: Not yet assigned.
For: DEFERRED RECONSTRUC-) Prior Application: 09/044,919
TION OF OBJECTS AND) Prior Application Art Unit: 2154
REMOTE LOADING FOR) Prior Application Examiner: K. Coulter
EVENT NOTIFICATION IN A)
DISTRIBUTED SYSTEM)

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

PRELIMINARY AMENDMENT

Prior to the examination of the above application, please amend this application
as follows:

IN THE CLAIMS:

Please cancel claim 1 and add new claims 21-42 as follows:

- 21. In a data processing system having an RPC mechanism used by a program, a method for transmitting objects comprising:
receiving an object in a form of a stream from a remote RPC mechanism; and deferring reconstruction of the object until requested to perform reconstruction by

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deferring reconstruction of the object until requested to perform reconstruction by the program.

22. The method of claim 21, further comprising:
reconstructing the object using code identified in the stream, when requested to perform reconstruction by the program.
23. A method in a data processing system for transmitting an object from a first RPC mechanism to a second RPC mechanism that is used by a program, comprising:
forming a stream out of the object by the first RPC mechanism;
sending the stream to the second RPC mechanism by the first RPC mechanism;
receiving the stream by the second RPC mechanism; and
deferring reconstruction of the object by the second RPC mechanism until requested to perform the reconstruction by the program.
24. The method of claim 23, further comprising the step, performed by the second RPC mechanism, of:
reconstructing the object using code identified in the stream, when requested to perform reconstruction by the program.

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25. A method in a data processing system for transmitting an object from a first RPC mechanism to a second RPC mechanism, comprising:
forming a stream out of the object by the first RPC mechanism;
sending the stream from the first RPC mechanism to the second RPC mechanism;
storing the stream by the second RPC mechanism; and
deferring reconstruction of the object by the first RPC mechanism until the stream is returned from the second RPC mechanism to the first RPC mechanism in response to the occurrence of an event.
26. The method of claim 25, further comprising:
reconstructing the object by the first RPC mechanism using code identified in the stream.
27. A method for processing objects in a distributed system comprised of multiple machines, comprising:
receiving a stream containing an identifier of an event listener and a self-describing form of an object associated with a request for notification of a particular event within the distributed system; and

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in response to occurrence of the particular event, sending the stream to the identified event listener for reconstruction of the object using program code identified in the stream.

28. The method of claim 27, wherein the stream is received from the event listener.
29. The method of claim 27, wherein the stream is received from a machine other than the event listener.
30. An apparatus for processing objects in a data processing system comprising:
a module configured to
receive an object in a form of a stream from a remote RPC mechanism,
and
defer reconstruction of the object until requested to perform reconstruction
by the program.
31. The apparatus of claim 30, further comprising:
a module configured to reconstruct the object using code identified in the stream,
when requested to perform reconstruction by the program.

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32. An apparatus for transmitting an object from a first RPC mechanism to a second RPC mechanism that is used by a program, comprising:
- a module configured to form a stream out of the object by the first RPC mechanism;
- a module configured to send the stream to the second RPC mechanism by the first RPC mechanism;
- a module configured to receive the stream by the second RPC mechanism; and
- a module configured to defer reconstruction of the object by the second RPC mechanism until requested to perform the reconstruction by the program.
33. The apparatus of claim 32, further comprising:
- a module configured to reconstruct the object using code identified in the stream, when requested to perform reconstruction by the program.
34. An apparatus for transmitting an object from a first RPC mechanism to a second RPC mechanism, comprising:
- a module configured to form a stream out of the object by the first RPC mechanism;
- a module configured to send the stream from the first RPC mechanism to the second RPC mechanism;
- a module configured to store the stream by the second RPC mechanism; and

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a module configured to defer reconstruction of the object by the first RPC mechanism until the stream is returned from the second RPC mechanism to the first RPC mechanism in response to the occurrence of an event.

35. The apparatus of claim 34, further comprising:
a module configured to reconstruct the object by the first RPC mechanism using code identified in the stream.
36. An apparatus for processing objects in a distributed system comprised of multiple machines, comprising:
a module configured to receive a stream containing an identifier of an event listener and a self-describing form of an object associated with a request for notification of a particular event within the distributed system;
a module configured to send, in response to occurrence of the particular event, the stream to the identified event listener for reconstruction of the object using program code identified in the stream.
37. The apparatus of claim 36, wherein the receiving module receives the stream from the event listener.

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38. The apparatus of claim 36, wherein the receiving module receives the stream from a machine other than the event listener.
39. A computer-readable medium containing instructions for controlling a data processing system to perform a method, the data processing system having an RPC mechanism used by a program, the method comprising the steps performed by the RPC mechanism of:
receiving an object in a form of a stream from a remote RPC mechanism; and deferring reconstruction of the object until requested to perform reconstruction by the program.
40. A computer-readable medium containing instructions for controlling a data processing system to perform a method, the method for transmitting an object from a first RPC mechanism to a second RPC mechanism that is used by a program, the method comprising the steps of:
forming a stream out of the object by the first RPC mechanism;
sending the stream to the second RPC mechanism by the first RPC mechanism;
receiving the stream by the second RPC mechanism; and deferring reconstruction of the object by the second RPC mechanism until requested to perform the reconstruction by the program.

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41. An apparatus for providing notification of an event in a distributed system, comprising:

a transmitting machine configured to

specify an object associated with a request for notification of the event,

and

form a stream out of the object;

an event generator configured to, upon receipt of the stream, store the stream,

and

in response to occurrence of the event, output the stream; and

an event listener configured to, upon receipt of the stream from the event

generator,

reconstruct the object by accessing program code identified in the stream.

42. An apparatus for deferring reconstruction of an object in a distributed system, comprising:

a transmitting machine configured to

specify an object,

form a stream out of the object, and

send the stream to an intermediate machine;

the intermediate machine configured to

receive the stream from the transmitting machine,

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the intermediate machine configured to
receive the stream from the transmitting machine,
store the stream, and
in response to occurrence of an event, send the stream to a receiving
machine; and

the receiving machine configured to
receive the stream from the intermediate machine, and
reconstruct the object by accessing program code identified in the stream.

REMARKS

The present application is a continuation under 37 C.F.R. § 1.53(b) of pending prior application Serial No. 09/044,919 filed March 20, 1998. By this Preliminary Amendment, Applicants have cancelled claim 1 and added new claims 21-42. Applicants respectfully request that these claims be added prior to examination of the present application.

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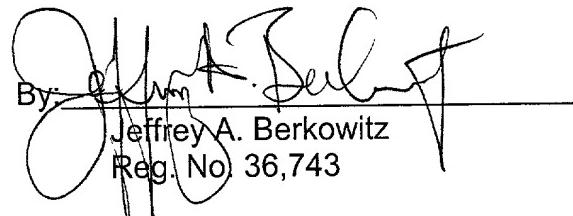
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If there is any fee due in connection with the filing of this Preliminary
Amendment, please charge the fee to our Deposit Account No. 06-0916.

Respectfully submitted,

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Dated: June 26, 2001

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